English Language and Linguistics (2025), 1–24
doi:10.1017/S1360674325100403

CAMBRIDGE UNIVERSITY PRESS

RESEARCH ARTICLE

Motivations for specialisation: testing the feasibility of polysemous pre-emption in the competition between *will* and *must*

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(Received 30 January 2025; revised 28 April 2025; accepted 15 June 2025)

Abstract

The article looks at instances of specialisation for specific linguistic contexts in 'command' and 'inference' uses of *will* and *must*. It tests the feasibility of different motivations for this specialisation, such as statistical and construal pre-emption. It also proposes a new motivation for specialisation, polysemous pre-emption, i.e. whether a strongly entrenched polyseme of a given expression might pre-empt the use of an expression with a less strongly entrenched polyseme. The investigation uses corpus analysis and distinctive collexeme analysis to test the three motivations (statistical, construal, and polysemous pre-emption). The results show that all instances of specialisation with *will* and *must* could be explained through construal pre-emption and/or polysemous pre-emption, thus making recourse to statistical pre-emption unnecessary.

Keywords: specialisation; competition; modality; distinctive collexeme analysis

1. Introduction

Specialisation is a specific outcome of competition between two or more functionally equivalent expressions, where one expression is clearly preferred over the other in a specific linguistic context. The phenomenon has been investigated in variationist studies (e.g. Tagliamonte 2004; Torres Cacoullos & Walker 2009; Denis & Tagliamonte 2017), in grammaticalisation studies (e.g. Hopper 1991) and in Diachronic Construction Grammar (e.g. Hilpert 2012; De Smet *et al.* 2018). The competition between *will* and *be going to* is especially often investigated: Denis & Tagliamonte (2017) look at the competition between *will* and *be going to* for the expression of future reference in North American English and find that *be going to* specialises for interrogatives and protasis clauses, while *will* specialises for apodosis clauses. Hilpert (2012), using distinctive collexeme analysis, further finds that in British English *be going to* specialises for collocation with *say*.

One problem with these studies is that they underestimate more fine-grained functional differences between *will* and *be going to*. While both expressions have future reference, they differ in the degree to which they express different futural (intention, prediction) as well as non-futural meanings. *Will* is much more frequent with 'prediction' than with intention

(Nesselhauf 2012) and additionally occurs with meanings that *be going to* is unavailable with, e.g. willingness, volition and dynamic modality. The above-mentioned studies do not differentiate between these different meanings when attesting specialisation. This is problematic because what might seem to be a specialisation for a specific context might actually be due to functional differences.

Recent studies are more sensitive to such fine-grained differences in meaning. Leclercq & Depraetere (2022), for instance, compare *be able to*, *can* and *could* in terms of different meanings they express (epistemic, ability, opportunity etc.). They find that *be able to* specialises for the expression of what they call 'actualised opportunity' (e.g. *We were able to see the Eiffel Tower).* Hilpert & Flach (2021) find that collocational preferences relatively robustly predict the difference between deontic and epistemic uses of *must* and *may.*

There have also been attempts to offer motivations for specialisation. A motivation often invoked in grammaticalisation studies is retention of distributional preferences. Torres & Cacoullos (2009), for instance, argue that the fact that in present-day English *be going to* occurs more often than *will* with epistemic stance (*I think*) is because such contexts were needed initially to jump-start its grammaticalisation and are retained still. Another motivation is differences in connotation or construals: Palmer (1990) argues that *will* always implies contingency, which explains its higher frequency in the apodosis of *if*-clauses. And lastly, statistical pre-emption has been proposed as a motivation, which means that speakers choose one expression over another in a specific linguistic context because it is more idiomatic (e.g. *#Explain me this* vs *Explain this to me*) (Goldberg 2019).

In this article, I test the value and feasibility of the different motivations for specialisation: construal differences (henceforth construal pre-emption), statistical pre-emption and also a new motivation I propose, which I call polysemous pre-emption. I define polysemous pre-emption as the semasiological counterpart to statistical pre-emption that considers whether better entrenched polysemes of an expression may pre-empt the use of that expression with less entrenched polysemes in particular contexts of use. For a case study, I look at the competition between *will* and *must* with two specific meanings: the deontic 'command' meaning (e.g. *You must listen to me!*) and the epistemic 'inference' meaning (e.g. *You must be tired*). For each meaning, I identify collexemes that *will* or *must* specialise for (i.e. where one is much more frequent than the other) and test in how far each of the three types of pre-emption may account for specialisation.

The article is structured as followed: section 2 gives an overview of the three motivations for specialisation I want to explore (statistical, construal and polysemous pre-emption). Section 3 gives an overview of the semantics of *will* and *must* and specifically attests the extent to which they compete for expression of the meanings 'command' and 'inference'. Section 4.1 introduces the methodology. Section 4.2 presents the results of the investigation. Section 5 discusses the implications of the results.

2. Motivations for specialisation

In this section, I give more in-depth characterisations of the three types of pre-emption I investigate in this article and their shortcomings: construal, statistical and polysemous pre-emption. I do not look at pre-emption that follows from retention of earlier distributional preferences, which was mentioned in the introduction, because this is mainly helpful when looking at syntactic contexts and in this article I mainly focus on specialisation for specific meanings and collexemes.

The first type of pre-emption is what I call CONSTRUAL PRE-EMPTION (or differences in construal and connotation). This motivation can be linked to the isomorphism principle which holds that differences in form should also signal differences in meaning (Goldberg 1995: 67; Croft 2001: 108ff.). In cognitive linguistics, especially, this is taken to mean that two forms, even

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when they seem to have the same communicative function, differ in how they construe this function. *You're welcome* and *No worries* can both serve the communicative function of responding to thanks but imply different construals: *You're welcome* foregrounds the appreciation of the addressee, while *No worries* foregrounds the minimisation of the favour (Brinton 2021). Thus, if either of the expressions specialises and starts to occur only in specific contexts or with specific speakers, this specialisation would most likely be motivated by the differences in construal.

One problem with construal pre-emption is that it cannot explain specialisation with competing expressions that genuinely seem to have the same coded meaning. These are sometimes called 'alternations' or 'near-synonyms'. 'Near synonymy' often occurs with more schematic patterns and more abstract meanings such as the dative alternation (e.g. Perek 2012), particle placement alternation (Cappelle 2006) and some modal expressions (Hilpert & Flach 2021). Since alternations are assumed to be true functional equivalents, construal differences cannot account for specialisation in these cases, because the competing expressions do not imply a different construal.

The second type of pre-emption, STATISTICAL PRE-EMPTION, might offer a solution here. Goldberg (2019) sums up the idea nicely in the following quote:

> Native speakers have learned a more conventional way to express the intended messages in context. We favor formulations that have become entrenched through previous exposure for expressing our intended messages, because we implicitly understand those formulations to represent the 'right' way to use our language. (Goldberg 2019: 75)

Statistical pre-emption is an onomasiological notion (see also 'onomasiological salience', Geeraerts 2017). It means that an expression is better entrenched with a specific meaning and a specific context than competing expressions with the same meaning and the same context. Specialisation in the dative-alternation is good example of statistical pre-emption: the ditransitive and *to*-dative can both be used to refer to some sort of transfer. While many verbs (*give*, *tell*) occur with both patterns, some verbs (e.g. *explain*) almost exclusively occur with the *to*-dative. Goldberg argues that the use of the ditransitive with *explain* (*#Explain me something*) is pre-empted by the better entrenchment of *explain* with the functionally equivalent *to*-dative expression (*Explain something to me*).

Statistical pre-emption is a useful concept for explaining specialisation when construal cannot (or cannot alone) account for it, but it is also circular to a certain extent, as it takes itself as evidence. It holds that an expression is selected over a competing expression, because this has always been the case in the speaker's experience. While this might be true in some cases, there may be cases of specialisation that can also be explained by other entrenchment phenomena.

The third type of pre-emption I want to discuss, POLYSEMOUS PRE-EMPTION, might, I suggest, be such an entrenchment phenomenon and could be seen as both an additional and alternative motivation for specialisation. Polysemous pre-emption can be seen as the semasiological equivalent to statistical pre-emption (see also Geeraerts 2017 on 'semasiological salience'). It means that an expression might be pre-empted from being used with a meaning (or polyseme) in a specific context because that expression is already very well entrenched in that context with another meaning (or polyseme). The speaker might thus opt to use a different expression for a given meaning.

Polysemous pre-emption has not been investigated as a motivation for specialisation, but it is related to other phenomena, specifically ambiguity resolution and ambiguity avoidance, which have been subject to some investigation.

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Ambiguity resolution refers to how listeners process lexically ambiguous expressions. There are many models for ambiguity resolution, some arguing that different meanings are processed in parallel (e.g. Rodd, Johnsrude & Davis 2010) and others arguing for the possibility of sequential processing (e.g. Giora 2003). What both types of approaches agree on is that in the absence of contextual cues, listeners will always resolve lexical ambiguities by selecting the more frequent of the two meanings (Rodd 2018). For instance, if one hears the sentence *John broke my record* without any context, it is predicted that listeners will select the more frequent meaning (probably *record* 'high score'), rather than the less frequent meaning (*record* 'CD').

Ambiguity avoidance is a controversial phenomenon; its proponents hold that speakers avoid using expressions that are ambiguous if they can and instead opt for non-ambiguous expressions. While evidence for syntactic ambiguity avoidance is mixed (Rohdenburg 2021; Zehentner 2022), there is some clearer evidence for lexical ambiguity avoidance (Ferreira & Dell 2000). An ambiguity avoidance account would predict that speakers would avoid saying *Mary broke my record* and instead say *Mary broke my CD* to avoid potential ambiguities.

Polysemous pre-emption is similar to ambiguity avoidance in its effect, but conceptually they are distinct: ambiguity avoidance implies that speakers are aware of potential ambiguities and are actively trying to avoid them, regardless of how well entrenched the given meanings are. This may well be the case. Polysemous pre-emption, on the other hand, holds that speakers are prevented from accessing an ambiguous expression to express a specific meaning in a specific context when it is more strongly associated in that context with a different meaning. It would predict that in a situation where John has broken Mary's CD, Mary would say *John broke my CD* rather than *John broke my record*, not merely because *record* is ambiguous in general, but because *record*, specifically in the context of breaking, is better entrenched with the meaning 'high score' than with the meaning 'CD'.

Polysemous pre-emption is further motivated by assumptions about the organisation of linguistic knowledge in the brain. Cognitivist approaches argue that linguistic knowledge is stored in a network; forms and meanings are connected by associative links if they frequently co-occur, to the extent that forms and meanings might be stored in a single node in the network as constructions (e.g. Goldberg 2006; Bybee 2010; Diessel 2019; Schmid 2020). Links and nodes that are frequently activated have a certain degree of entrenchment (Langacker 2013) or resting-level activation (Hudson 2010: 73), which means that they can be more easily retrieved. Online language processing is guided both by resting-level activation and also by activation patterns that emerge from the context of use. It is assumed that different meanings of an expression are stored together because of their association with the expression. If one of the meanings is especially frequent, it will be much better entrenched with the expression, more easily activated and thus better associated with it. The idea is that this very well-entrenched meaning could pre-empt the use of the expression with less entrenched meanings to avoid ambiguity.

3. Competition for the expression of 'command' and 'inference': *will* and *must*

To test the extent to which polysemous pre-emption would be an equally good explanation for specialisation as construal and statistical pre-emption, I will look at instances of specialisation in the case of *will* and *must*, with the meanings 'command' and 'inference' respectively.

Will and *must*, as most modal verbs, express a variety of different modal meanings (e.g. Visser 1969; Palmer 1990):

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- deontic meanings: 'command' (*You must/will leave now*), 'obligation' (*Kids must respect their parents*), 'plan' (*The train will arrive soon*),[1] 'intention' (*We will go to the cinema later*) and 'willingness' (*Will you help me with this?*);
- epistemic meanings: 'inference' (*He must/will know about it*) and 'prediction' (*It will rain*);
- dynamic meanings: 'genericity' (*Oil will float on water*), 'circumstantial possibility' (*You will be seen*).

In the following two sections, I will explore the degree of conceptual overlap between *will* and *must* with the meanings 'command' and 'inference' to determine whether they are similar enough in meaning to qualify for statistical pre-emption.

3.1. *'Command'* will *and* must

'Command' is a deontic meaning that takes the speaker as the director or the 'deontic source' and demands an agent to do their bidding (Huddleston & Pullum *et al.* 2002: 183; Leech 2004: 78; Collins 2009: 134). Both *must* and *will* have been associated with this use.

(1) (a) You **must** clean up this mess at once. (Huddleston & Pullum *et al.* 2002: 183)
(b) You **will** clean up this mess at once.

In general, both imply a high degree of force on the part of the speaker, so that the addressee is not merely invited or requested to do something, but instead it is presumed that the speaker has the authority to force compliance (Palmer 1990: 73).

Some researchers argue that *will* and *must* contrast in terms of politeness, although there does not seem to be a consensus on which of the two is the politer one. Some argue that *must* is more polite than *will* (Coates 1983: 183; Perkins 1983: 45). Others hold commands with *will* are quite mild, especially in the context of superiors giving directions to their servants; this is however more seen in contrast to the imperative, rather than in contrast to *must*, as is evident in (2a) (Bain 1904: 169 in Visser 1969: 1695ff.). Given instances such as (1b), Visser instead argues that *will* can express various degrees of 'mildness' or 'sternness' depending on the contexts (2b–c):

(2) (a) You **will** see that due precautions are taken.
(b) You**'ll** leave your noise anon, ye rascals.
(c) Your lordship **will** pardon me for the frequent repetition of these cant words.

Although *will* can apparently express different degrees of force, there are some contexts in which *will* seems to imply too much force to be felicitous. These are contexts, in which *must* can occur to express a 'passionate' appeal (3) or else advice (4) (Visser 1969: 1806f.)

(3) (a) You **must** not think me as cruel as this.
(b) #You **will** not think me as cruel as this.

(4) (a) To praise Gibbon heartily, you **must** speak in low tones.
(b) #To praise Gibbon heartily, you **will** speak in low tones.

[1] 'Plan' can be seen as a deontic meaning as it conceptually implies a human director who is in control of the proposed future event (the speaker does not predict that the train will leave soon, rather they know that the train's leaving is a consequence of the control some humans have over when trains leave) (cf. Copley 2002).

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Thus, although *will* might be infelicitous in some contexts because it can imply a higher degree of force, *will* and *must* are largely interchangeable when it comes to the expression of commands.

3.2. *'Inference'* will *and* must

'Inference' is an epistemic meaning, where the speaker signals that a proposition is predictable from something else, either past experience or present evidence. Both *will* and *must* are associated with this meaning and express a high degree of certainty and are thus thought to be relatively interchangeable (Coates 1983: 177; Huddleston & Pullum *et al.* 2002: 189; Leech 2004: 86; Collins 2009: 127).

(5) (a) Douglas Hard **will** doubtless be grateful for that endorsement not least because of the pressure he **must** be feeling this morning. (Collins 2009: 127)
(b) Douglas Hard **must** doubtless be grateful for that endorsement not least because of the pressure he **will** be feeling this morning.

Despite their similarities, they are supposed to differ in terms of the kind of evidence and the type of conclusion implied in the inference. It is argued that *will* often expresses more of an assumption or expectation that something is the case, usually on the grounds of previous knowledge. *Must* in contrast rather expresses 'the only possible conclusion' (Palmer 1990: 57) based on present evidence (Huddleston & Pullum *et al.* 2002: 189, Perkins 1983: 45). As such, *will* can be semantically weaker compared to *must.*

(6) (a) The lights are on. John **must** be in his office.
(b) The lights are on. #John **will** be in his office.

Palmer argues that only (6a) would be felicitous in the context of present evidence, while (6b) is infelicitous. This is because the lights being on seems to be such compelling evidence that it is unclear why the speaker would not express a higher commitment to their inference by using *must.*

While *must* cannot always be replaced by *will*, *will* usually can be replaced by *must* without much change in meaning, as can be seen in (7) (Leech 2004: 86).

(7) (a) It's eleven o'clock. John **must** be in his office.
(b) It's eleven o'clock. John **will** be in his office.

Thus, although *must* and *will* are not perfect equivalents in the expression of inference, they are sufficiently similar to compete in at least some contexts, especially given that *will* can usually be replaced by *must.*

4. Case study: 'Command' and 'inference' *will* and *must*

4.1. *Data collection and analysis*

To investigate cases of specialisation in 'command' and 'inference' *will* and *must* and possible forms of pre-emption I have carried out a quantitative corpus analysis using the final period of the *Corpus of Late Modern English* (CLMET 3.1; De Smet et al. 2015) (1850–1920) and only included the speech-based genres, novels and drama. The size of this subset is around 12 million words. I have opted for a historical rather than present-day corpus mainly because *must* is in decline in present-day spoken English in all of its uses because of competition with *have to* and *got to* (Close & Aarts 2010). Further, directive speech acts and

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strong expressions of 'command' specifically seem to be in decline in present-day English, probably because present-day British and American societies are less hierarchically organised than those of the eighteenth to early twentieth century (Kohnen 2008: 303; Nesselhauf 2012: 122).

The corpus was searched for instances of *will* and *must* in affirmative contexts with second-person subjects, using the following query: You {must, will} *Verb.* Looking at such a specific context means that contextual differences between *will* and *must* will be smaller and this increases the likelihood of finding instances where *will* and *must* are in genuine competition. I have particularly opted for second-person subjects because these are likely to occur both with the 'command' and 'inference' meaning. This search has yielded 2,031 instances. Instances that co-occurred with *have* were excluded as they were often used for modal perfects, leaving 1,935 instances.

In a first step, I carried out a first annotation of the semantics of the expressions, differentiating between 'inference', 'command' and 'other'.

An instance was annotated as denoting 'inference' if it implied

(a) an evaluation by the speaker;
(b) the proposition making reference to present time (not the past or the future);
(c) and/or the proposition being predictable to some degree from the speaker's knowledge.

An instance was annotated as denoting 'command' if it implied

(a) the speaker being the authority that demands that a future event will happen;
(b) the addressee being able/willing? to carry out the future event; and/or
(c) the addressee not being thought to have a say in the matter.

'Other' was assigned if neither 'inference' nor 'command' could be diagnosed. Table 1 gives an overview of the number of instances per meaning.

In a second step, I carried out a meaning-specific distinctive collexeme analysis to determine instances of specialisation, i.e. where one expression occurs more often with a given verb than the other. Distinctive collexeme analysis identifies collocational differences between two near-synonymous expressions. By looking at the frequency with which each of the alternating expressions occurs with a collocate compared to their occurrence with other collocates, the expected frequency for each expression with this collocate can be calculated. If one expression occurs more often than expected with a collocate, that collocate can be said to be *attracted* by this expression. To see whether this attraction is statistically significant, an association measure can be applied, which can be used to measure collostructional strength, i.e. the strength of association between the expression and the collocate (Stefanowitsch 2013). Table 2 gives an overview of the frequencies calculated in distinctive collexeme analysis.

Because I am interested in specialisation with particular meanings (command, inference) in a very constrained context (second-person subject, positive), I have adjusted the distinctive collexeme analysis to reflect these constraints, which can be seen in table 3. I used z-score as an association measure to calculate collostructional strength. Specialisation was attested when the significance of attraction was $p \geq 0.05$.

Table 1. Instances of *will* and *must* per meaning

Command	Inference	Other
511	243	1,277

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Table 2. Relevant frequency types in distinctive collexeme analysis

	Occurrence with collocate	Occurrence outside collocate
Exp A	Exp A with collocate	Exp A outside collocate
Exp B	Exp B with collocate	Exp B outside collocate

Table 3. Adjusted frequency types for distinctive collexeme analysis

	Occurrence with collocate	Occurrence outside collocate
will	*will* with collocate with {command, inference} in search context	*will* outside collocate with {command, inference} in search context
must	*must* with collocate with {command, inference} in search context	*must* outside collocate with {command, inference} in search context

To identify cases of specialisation, I extracted the verbs that *will* and *must* occur with in their 'command' and 'inference' meanings, added up number of instances per verb and calculated the collostructional strength for each of the verbs that *will* and *must* both occur with. A case of specialisation was identified, when a verb was significantly attracted to one of the modals according to the z-score.

With the meaning 'command', 146 different verbs occurred with *will* and *must*, 52 uniquely with *will* and 82 uniquely with *must.* With the meaning 'inference', 23 different verbs occurred with *will* and *must*, 3 uniquely with *will* and 9 uniquely with *must.*[2] Table 4 shows the cases of specialisation, i.e. the verbs that are significantly attracted to both of the modals, with the meaning 'command'; table 5 does the same for 'inference'.

To investigate the possibility of polysemous pre-emption, a second round of semantic annotation was carried out. Here, I looked at instances of the verbs involved in specialisation that had been coded as 'other' in the first round and further specified their meaning according to the present-day semantics of *will* and *must* (Nuyts 2006; Palmer 1990; Collins 2009; Huddleston & Pullum *et al.* 2002). *Will* was annotated for prediction, dynamicity, willingness, plan and intention (including volition). *Must* was annotated for intention, dynamicity and obligation (including circumstantiality).

Table 6 gives an overview of all the meanings that were annotated for, the annotation principles and some examples.

These semantic meanings are broadly conceptualised as belonging to two groups of modal meaning:

(I) 'epistemic': involves the evaluation by a speaker [inference, prediction, dynamic], or
(II) 'directive': implies an authority committed to bringing the future event about [willingness, plan, intention, obligation].

[2] We would expect to find a greater variety of verbs occurring with the 'command' uses of *will* and *must* than with their inference use. 'Inference' is usually restricted to state verbs and use with progressive or perfect aspect (*#She must$_{infer}$ bake now* but *She must$_{inf}$ be baking now*). The 'command' use needs to occur with dynamic verbs (*#You must$_{com}$ know this!).* It can occur with state verbs; however, the co-occurrence renders the state verbs dynamic (*You must be$_{com}$ quiet!*).

[3] For *excuse* and *forgive* the p-values were not significant; however, given that *must* occurs with both more than 10 times and *will* not at all, I have opted to treat these as cases of specialisation.

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Table 4. Specialisation with 'command'

	z-score	*will*	*must*	Specialisation for
remember	–2.30*	1	27	*must*
forgive[3]	–1.83	0	13	*must*
excuse	–1.75	0	12	*must*

*p<0.05.

Table 5. Specialisation with 'inference'

	z-score	*will*	*must*	Specialisation for
be	–2.91*	2	51	*must*
know	–2.51*	3	42	*must*
remember	6.82*	26	3	*will*

*p<0.05.

4.2. *Results*

In this section, I investigate which of the three types of pre-emption – construal, statistical and polysemous pre-emption – can best explain the identified cases of specialisation. I do this in two steps: in a first step, I investigate whether *must* and *will* can be used interchangeably with a given verb without a difference in meaning to test for CONSTRUAL PRE-EMPTION. If they cannot, this is taken as an indication of a case of construal pre-emption and I offer arguments for why *must* and *will* offer different construal and how this explains the infelicity. In a second step, I investigate if, in addition to or instead of construal pre-emption, there might be a case for POLYSEMOUS PRE-EMPTION. For this, I look at other meanings that *will* and *must* occur with in conjunction with a given verb, to see if there is strong association between *will/must* and this verb with another meaning which might have a pre-emptive effect. I argue that only if neither construal nor polysemous pre-emption can be attested, statistical pre-emption should be appealed to.

4.2.1. *Specialisation of 'inference'* must be *over* will be

The investigation shows that for the meaning 'inference' there is a clear preference for *be* to occur with *must* (54 instances) rather than with *will* (5 instances).

POTENTIAL FOR CONSTRUAL PRE-EMPTION: in some instances, *must* and *will* are interchangeable, as can be seen in (8) (modal outside the curly brackets is the actually attested modal). These instances usually involve the inference of an emotional state such as tiredness, hunger or stress (*must* 19 instances, *will* 1):

(8) (a) She told him she had been to see Phoebe, and of her death. "You **must {will}** be very tired." (CLMET3_1_3_219)
(b) Jim, you **must {will}** be perished, such a night as this. (CLMET3_1_3_253)
(c) "Are you going so soon ?" "I 'm busy, and - - " "Yes, You **must {will}** be busy now."
(d) Our conversation may be prolonged. One never quite knows what may crop up. You **will {must}** be overtired. And to-morrow, when I am gone, there will be things to do (CLMET3_1_3_255)

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Table 6. Annotation principles

Meaning	Annotation principle	Example
Command: the speaker tells someone else to do something.	(a) an evaluation by the speaker; (b) the proposition making reference to present time (not the past or the future); (c) the proposition being predictable to some degree from the speaker's knowledge	*Gwendolen, you will accompany me.* (CLMET3_1_3_262)
Inference: the speaker infers something about what might be true at the time of speech.	(a) the speaker being the authority that demands that a future event will happen; (b) the addressee being the one to carry out the future event; (c) the addressee not being thought to have a say in the matter	*Tired? You must be.* (CLMET3_1_3_214)
Prediction: the speaker predicts that something is the case in the future.	(a) the speaker is the evaluator; (b) the proposition is inferred from knowledge; (c) the proposition makes reference to future time	*Yet you will forget me before I forget you.* (CLMET3_1_3_325)
Dynamic: a general property of the subject or situation is described.	(a) the speaker is evaluator; (b) the proposition is inferred from knowledge; (c) the proposition describes a general property of the subject	*"Come away from the window, dear", said Miss Bartlett. "You will be seen from the road."* (CLMET3_1_3_319)
Intention: the speaker or subject intends to do something in the future.	(a) the speaker or subject is committed to bringing about a future event; (b) they will carry it out	*"Oh, I can't stick this anymore. If you must know all about me –"* (CLMET3_1_3_314)
Plan: there is a plan for something to happen in the future.	(a) someone is committed to bringing about a future event, but it is not clear who	Quex. *In a few hours' time. In the first place, you will be called in your room. You won't be there.* (CLMET3_1_3_263)
Willingness: someone is asked whether they'd be willing or someone willing to do something.	(a) someone is committed to bringing about a future event; (b) the subject is willing to carry it out	*If you will be so good as to take seats, gentlemen, I shall tell them.* (CLMET3_1_3_270)
Obligation:[4] there is a (moral or otherwise) obligation for something to be done.	(a) an authority that is not the speaker demands that the future event occur; (b) the addressee is to carry out the future event; (c) the authority and the addressee stand in a force relation	*The moral of it is that you must be content with your own people.* (CLMET3_1_3_272)

The inference of an emotional state is usually made on the basis of present evidence (*she had been to see Phoebe, such a night as this*), which naturally favours *must*. *Will* is also possible in (8a–c) and is also attested on its own once with an emotional state, although this instance may be an instance of 'prediction' as well (see 8d). While *will* can occur in these instances, it

[4] It can be difficult to differentiate between the obligation and 'command' uses of *must* sometimes (as reviewer 2 pointed out): for instance, *You must pass this exam* might seem like a 'command' by the speaker but the warrant is likely to ultimately come from the university's or school's regulations. Examples like this need to be dealt with on a case-by-case basis. My basic principle for differentiation is: if an external warrant can be inferred, it will be coded as obligation, if not, it is clearly a 'command' case.

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seems to offer a different construal, as it seems to imply that the speaker is not only drawing on the present evidence but also on their own experience.

Outside emotional state predicates, replacing *must* with *will* is questionable to impossible, as can be seen in (9)

(9) (a) "You **must {?will}** be very particular, if you call it breaking the rules not to insist on his marrying his sisters", said Croässaqugha. (CLMET3_1_3_231.)
(b) I wish you would advise us. You are so old, you **must {?will}** be very wise. (CLMET3_1_3_280)
(c) "Oh no – it can not be – you **must {#will}** be mistaken." (CLMET3_1_3_244)
(d) "DEAR FINN, – you **must {#will}** be mad; we can't touch this." (CLMET3_1_3_314)

In (9a–b) *will* seems odd because the given evidence is very much in focus and clearly related to the inference, which might conflict with the association of *will* with prior knowledge. In (9c–d), however, *will* seems to be infelicitous. This might be because the evidence is so pressing that it only allows one possible conclusion, rendering the more tentative *will*, which rather expresses a confidence based on past experience, infelicitous.

Will be also occurs outside emotional states and can be replaced by *must* as well with relatively little change in meaning:

(10) (a) You **will {must}** be wanting a quiet talk together. We shall see you at dinner. (CLMET3_1_3_284)
(b) But I have no gift – I can't ride the two horses, as you **will {must}** be able to, quite honestly. (CLMET3_1_3_253)

Examples (10a–b) seem overall more assumptive than conclusive, which might explain why *will* is used instead of *must.* In (10a), it is unlikely that there are very clear indications that the addressees want to have a quiet talk with each other. In (10b), similarly, there are no strong indications in the context that the addressee can ride the horses; the speaker is merely being polite.

Overall, construal pre-emption seems to motivate the specialisation of *must* for *be*, because in many instances *must* cannot be replaced by *will* and even in instances where it can, *will* seems to offer a different construal.

Potential for polysemous pre-emption: I now test whether in addition to construal pre-emption, there might be a case for polysemous pre-emption as well.

Figures 1a and b show the proportion of *must be* and *will be* instances, respectively, across the different polysemes associated with them. *Must be* most commonly occurs with 'inference', but it also occurs frequently with the meanings 'command' (23%) and 'obligation' (25%). Thus, inferential *must* does not seem to be polysemously pre-empted from occurring with *be. Will be*, on the hand, predominantly occurs with 'prediction' (68%); most of the other meanings are very low in frequency. 'Inference' and 'dynamic' are especially low at just about 2 per cent each. Predictive *will be* is not only relatively better entrenched than the other meanings of *will*, it is also very well entrenched: predictive *will be* occurs 139 times, which is much more frequent than inferential *must be* at 54 instances. This distribution suggests that speakers have a very strong association between the use of *will be* and 'prediction' and that the strength of their association might have a pre-emptive effect on the use of *will* with *be* with other polysemes.

This shows that while construal pre-emption can explain the specialisation of inferential *must be*, polysemous pre-emption can be an additional cognitive factor contributing to this specialisation.

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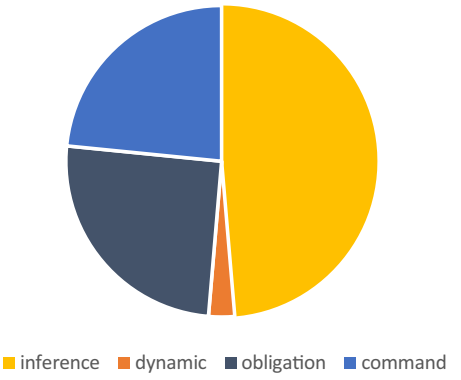

Figure 1a. Distribution of meanings of all instances of *must be*

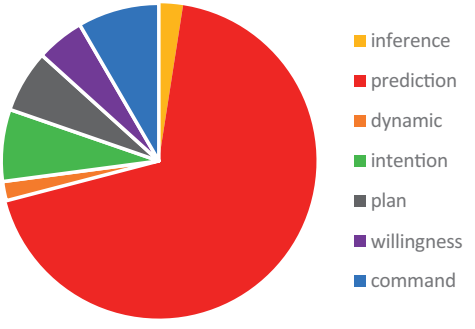

Figure 1b. Distribution of meanings of all instances of *will be*

4.2.2. Specialisation of 'inference' must know *over* will know

The investigation shows that *must know* with 'inference' (34 instances) is a lot more common than *will know* (5 instances) and thus suggests specialisation for inferential *must know.*

POTENTIAL FOR CONSTRUAL PRE-EMPTION: many inferential *must know* instances (60%) express an inference based on assumption and can thus largely be replaced by *will* without much change in meaning. Here, the two would be in genuine competition:

(11) (a) The history of all ages has shown – and surely you **must {will} know** this as well as I do – that as men can not cure the bodies of their patients if they have not been properly trained in hospitals under skilled teachers. (CLMET3_1_3_228)
(b) "You **must {will}** know", she said, addressing her little circle of listeners. "that the sun and moon were once rivals courting the earth for their bride at the same time." (CLMET3_1_3_244)
(c) I submit. You **must {will}** know best. (CLMET3_1_3_253)
(d) I think you **must {will}** know already. (CLMET3_1_3_318)

In (11a–d), *must know* seems to express an assumption on the part of the speaker about the addressee's knowledge rather than a conclusion based on evidence. None of the examples mentions any present indication; instead, vague epistemic stances (*surely*, *I think*, *I submit*, *best*) make the examples seem more assumptive than conclusive. Thus, *must* can be easily replaced by *will* in all the above instances. There might still be slight construal differences

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between *must* and *will,* though. With *will* being purely assumptive and based on past knowledge it seems to express a higher degree of confidence and speaker involvement than *must*: in (11a), for instance, *must* invokes some connotation of conclusion and thus creates some distance between speaker and addressee, whereas *will* does not.

Some instances of inferential *must know* cannot easily be replaced by *will.*

(12) (a) "If you are Greek and well brought up, you **must {?will} know** that I cannot comprehend a word of what you have spoken." (CLMET3_1_3_219)
(b) "But you **must {#will} know**, it is inconceivable that you should not know." (CLMET3_1_3_253)
(c) Lord Darlington: I don't know. Lord Windermere: You **must {#will} know**. I demand an explanation. (CLMET3_1_3_260)
(d) "Very dear friend", he urged with undaunted confidence, "you **must {#will} know** that I love you." (CLMET3_1_3_304)

In (12a) *will* might replace *must* as the evidence for the inference is rather more like past knowledge than a clear present indication. In (12b–d), *will* seems impossible, because the examples either imply that the speaker really does see their inference as the only possible conclusion (12b–c) or else points to some emotional aggravation on the part of the speaker (12d).

Will know can in general be replaced by *must*; instances usually express an assumption on the part of the speaker, which can be expressed by both *must* and *will.*

(13) (a) "He ought not to talk long", he said, hesitating, "you **will {must} know** – of course – better than any of us." (CLMET3_1_3_253)
(b) I can't remember if you ever came across my old friend Hardy – Augustus Hardy, the art critic – at all events you **will {must} know** whom I mean. (CLMET3_1_3_290)
(c) "I think I will go and rest", she said at last. "You **will {#must} know** all about the medicine." (CLMET3_1_3_300)

Must seems slightly odd even in (13a–b), because the speaker seems to express a very high degree of confidence (*at all events*, *of course*) in the addressee's knowledge without indicating any source of evidence. In (13c), however, *must* is infelicitous, because the context makes a conclusion reading impossible.

Must know and *will know* overall seem more functionally similar, as they are mostly interchangeable. There are, however, examples, where they are not interchangeable, pointing to construal differences between the two.

Potential for polysemous pre-emption: I now look at whether polysemous pre-emption may explain the specialisation for *must know.*

Figures 2a and b show the distribution of different polysemes with *must know* (figure 2a) and *will know* (figure 2b). *Must know* is clearly most frequent with 'inference' (72%) and thus strongly associated with it; it also occurs frequently with 'intention' (usually as *if you must know*) (21%). *Will know* is more frequent with 'prediction' (62%) than 'inference' (38%). Although predictive *will know* is more frequent than 'inference' *will know*, the difference between the two is not very big and the number of *will know* instances is quite low in general (12 instances).

The specialisation of inferential *must know* over 'inference' will *know* is thus unlikely to be motivated by polysemous pre-emption. Construal pre-emption seems the best possible option here.

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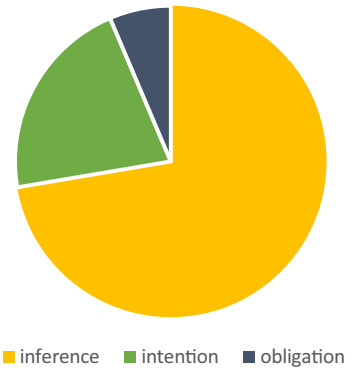

Figure 2a. Distribution of meanings of all instances of *must know*

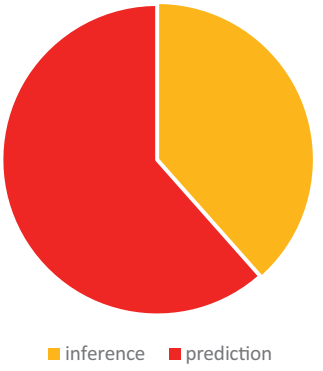

Figure 2b. Distribution of meanings of all instances of *will know*

4.2.3. Specialisation of 'inference' will remember *over* must remember

The investigation shows that *will remember* with 'inference' (25 instances) is more common than *must remember* (3 instances), which suggests a specialisation of 'inference' will *remember*.

POTENTIAL FOR CONSTRUAL PRE-EMPTION: *will remember* can be replaced by *must remember* in some instances but there seems to be a clear difference in construal. *Will remember* usually expresses the speaker's confidence in the addressee remembering a certain event. In many cases, a topic is being discussed and *you will remember* is inserted parenthetically as a polite way to signal that the speaker is discussing shared knowledge. The tone of all *will remember* instances is rather casual and does not imply agitation on the part of the speaker.

(14) (a) I wrote to you on that subject. You **will {must}** remember that. (CLMET3_1_3_259)
(b) You **will {must} remember** that we spoke of him on one occasion. (CLMET3_1_3_293)

In (14a–b), *must remember* can replace *will remember* but the construal seems very different. In (14a) for instance, the speaker is likely to be impatient, because they need to remind the addressee. The use of *will* signals a confident assumption; *must* on the other hand would have

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made the utterance sound more like a conclusion, which could be construed as seeming more agitated or even passive aggressive, e.g. *since I wrote to you, you must remember it, don't you?*.

In most cases, *must remember* cannot replace *will remember*:

(15) (a) You **will {?must} remember** that the last time on each occasion a dress was torn. (CLMET3_1_3_219)
(b) The old pulpit, you **will {?must} remember**, is much decayed in parts, and will be out of harmony with the building when it is renovated. (CLMET3_1_3_219)
(c) I trust you **will {#must} remember** that it is my especial wish that you should allow one who is in every way worthy of you to console you for my loss. (CLMET3_1_3_283)

In (15a–b) *must* could be used instead of *will* but seems strange because the instances are clearly assumptive not conclusive (implicit in the *that* clause and the parenthetical use). The *must* alternatives also seem to imply more emotional involvement, which clashes with the general casualness of tone of the utterances. In (15c) *must* is clearly infelicitous because of the *I trust* matrix clause, which makes it clear that the speaker expresses their confidence, based on their own assumptions rather than anything external.

Must remember, on the other hand, can be easily replaced by *will* without much change in meaning, as can be seen in (16):

(16) (a) Only after what you **must {will} remember** of your father, I am afraid you hardly find the people as poetic as the neighbourhood, do you? (CLMET3_1_3_244)
(b) Idle merriment and triviality would be out of place in his conversation. You **must {will} remember** his constant anxiety about the unfortunate young man his brother. (CLMET3_1_3_262)

The specialisation of 'inference' will *remember* seems to be again motivated by construal pre-emption.

Potential for polysemous pre-emption: I now test whether in addition there are grounds for polysemous pre-emption as well.

The figures show the relative frequency of *must remember* (figure 3a) and *will remember* (figure 3b) across different polysemes. Figure 3a shows that *must remember* is much more frequent with 'command' (90%) than 'inference' (10%); 'command' *must remember* might thus polysemously pre-empt the use of 'inference' *must remember*. Figure 3b shows that 'inference'

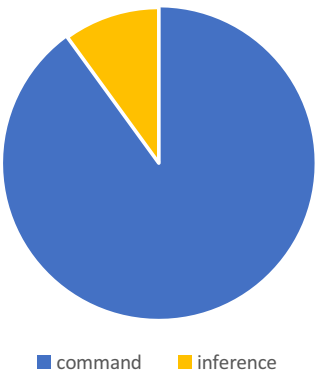

Figure 3a. Distribution of meanings with *must remember*

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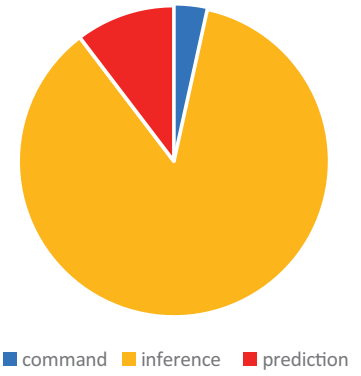

Figure 3b. Distribution of meanings with *will remember*

will remember is especially well entrenched (86%) and its use thus does not seem to be pre-empted by other polysemes.

This distribution seems to indicate that in addition to construal pre-emption, polysemous pre-emption could be a contributing factor in the specialisation of 'inference' *will remember*. Speakers associate *must remember* so much with the meaning 'command' that they avoid using it with 'inference' if they can.

4.2.4. Specialisation of 'command' must remember *over* will remember

The investigation shows that 'command' *must remember* is a lot more frequent (27 instances) than 'command' *will remember* (1 instance) and thus seems to be a case of specialisation.

POTENTIAL FOR CONSTRUAL PRE-EMPTION: *must remember* cannot be replaced by *will remember* when it expresses a reminder and can be paraphrased with 'don't forget', which is the case in all but one instance; it thus does not express an authoritative 'command' but rather a reminder. In almost all cases *you must remember* takes a clausal complement.

(17) (a) Then if we bargain, Lord Rosmore, you **must {#will} remember** that there are always two sides to a bargain. (CLMET3_1_3_293)
(b) But you **must {#will} remember** that his sister did more. (CLMET3_1_3_278)
(c) Well, perhaps – perhaps. But you **must {#will} remember** they had had great provocation. (CLMET3_1_3_231)
(d) Monica – there is one thing you **must {#will} remember**. (CLMET3_1_3_276)

In (17a–d) *will* cannot replace *must*, because it would be pragmatically too strong: in (17c), for instance, the speaker is trying to be diplomatic (*perhaps – perhaps*) and uses *must remember* to gently disagree with the addressee. *Will* could not express this gentle reminder and instead would sound very forceful.

The one instance where *will* can replace *must* is (18):

(18) You **must {will} remember** not to bother him, children. (CLMET3_1_3_306)

Example (18) differs from the instances in (17), because here *must remember* is followed by a *to*-infinitive clause rather than a finite clause. *Must remember (that)* is used as a reminder of fact whereas *must remember (to)* gives instructions for future conduct. While *will* was pragmatically too strong for the former, it is perfectly fine for the latter.

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It is thus unsurprising that the only 'command' *will remember* instance also occurs with a *to*-infinitive clause (see 19).

(19) You **will remember**, Aunt Juley, not to be drawn into discussing the engagement. (CLMET3_1_3_320)

Will and *must* thus show clear construal differences when it comes to the reminding of facts, where *must* suggests a polite invitation to remember and *will* a sharp warning, which explains the specialisation for *must remember* here.

Potential for polysemous pre-emption: looking at figures 3a and b again, it seems that polysemous pre-emption might play a role here as well. *Will remember* is very strongly associated with 'inference' (86%), which might explain why speakers avoid using it in the 'command' sense.

While 'command' and 'inference' on the surface seem like very different meanings, it seems that 'inference' *will remember* and 'command' *must remember* can fulfil the same communicative function or speech act, i.e. reminding, as can be seen in (20) and (21).

(20) (a) You **will**$_{\textbf{infer}}$ remember that the last time on each occasion a dress was torn. (CLMET3_1_3_219)
(b) You **must**$_{\textbf{command}}$ remember that the last time on each occasion a dress was torn.

(21) (a) But you **must**$_{\textbf{command}}$ remember that they had had great provocation. (CLMET3_1_3_231)
(b) But you **will**$_{\textbf{infer}}$ remember that they had had great provocation.

The (a) examples in (20) and (21) are the actual instances in which 'inference' *will* and 'command' *must* occur, while the (b) instances are respective paraphrases with 'command' *must* and 'inference' *will*. It seems that both can be used to express a polite reminder, but each offers a unique construal: 'inference' *will* by making assumptions about the addressee's memory; 'command' *must* by inviting the addressing to remember a fact.

4.2.5. *Specialisation of 'command'* must forgive *and* excuse *over 'command'* will forgive *and* excuse

The investigation shows that 'command' *must forgive* (13 instances) and 'command' *must excuse* (12 instances) are more common than the equivalents with *will*, as *will* occurs with neither to express the meaning of 'command'. This is a case of specialisation for *must. Forgive* and *excuse* will be jointly discussed, as they are semantically similar and exhibit similar distributions.

Potential for construal pre-emption: it seems that neither 'command' *must forgive* nor *must excuse* can be replaced by *will* (see (22) and (23)):

(22) (a) You **must {#will} forgive** me if I say anything that hurts you. (CLMET3_1_3_253)
(b) "You **must {#will} forgive** me, Miss Raeburn, for dispensing with an introduction", he said (CLMET3_1_3_272)
(c) "You **must {#will} forgive** me if I spoke irritably. I have a racking headache." (CLMET3_1_3_283)
(d) You **must {#will} forgive** me for having written last night. I ought not to have done it, and I understood your silence. (CLMET3_1_3_272)

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(23) (a) But you **must {#will} excuse** a momentary excitement. (CLMET3_1_3_255)
(b) You **must {#will} excuse** me, sir. (CLMET3_1_3_255)
(c) You **must {#will} excuse** me. I can put it off no longer. (CLMET3_1_3_318)
(d) You **must {#will} excuse** me if I say stupid things, but my brain has gone to pieces. (CLMET3_1_3_319)

Must forgive and *must excuse* have very similar functions. The speaker makes a semi-passionate appeal to the addressee to forgive or excuse them, often accompanied by a justification for the action they are asking forgiveness for. 'Command' *must* expresses a lower degree of force that nonetheless seems to carry a degree of urgency, thus rendering the effect of a passionate appeal. *Will forgive/excuse* is infelicitous in these instances because it does not have this emotional quality and instead only foregrounds the directive force the speaker exerts on the addressee, which seems inappropriate in the context of forgiveness and excusals. In (23b) for instance, *will* would make it seem as if the speaker demands to be excused rather than passionately asking (or even begging) to be excused.

Thus, the specialisation of 'command' *must* for *forgive* and *excuse* seems to be strongly motivated by the construal differences between *must* and *will.*

Potential for polysemous pre-emption: I now test whether polysemous pre-emption might also apply.

Figures 4a and 5a show that *must forgive* and *must excuse* exclusively occur with the meaning 'command'. This can be explained by the nature of the meanings involved and the second-person context restriction: *forgive* and *excuse* are accomplishment verbs and are thus less likely to occur with 'inference' than state verbs are. Obligation is strictly speaking not impossible since utterances like *you must forgive those that have wronged you* or *as a host, you must excuse some of your guest's peculiarities* may imply an authority other than the speaker. These types of utterances, however, might not occur often in speech-based genres, which might explain why they are unattested in this particular investigation.

On the other hand, figures 4b and 5b show that *will forgive/excuse* does occur with other meanings, namely 'prediction' and 'willingness': *will forgive* is especially strongly associated with 'willingness', while *will excuse* is strongly associated with 'prediction'. This might indicate polysemous pre-emption on top of construal pre-emption. We can also see this with the *will* paraphrases in (22) and (23): while 'command' *will* is infelicitous here as mentioned earlier, a 'prediction' *will* reading is perfectly fine – and possibly – the one we would default to if the meaning of *will* is not specified. Additionally, a 'prediction' *will* paraphrase of (22) and (23) does not seem to alter the communicative intent, i.e. a pragmatically implied speech act in which the speaker asks the addressee for forgiveness or

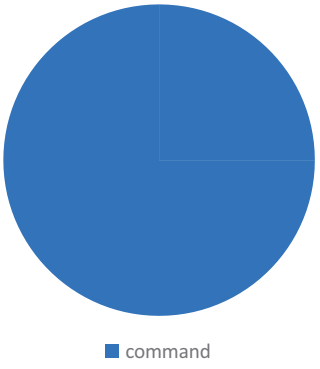

Figure 4a. Distribution of meanings with *must forgive*

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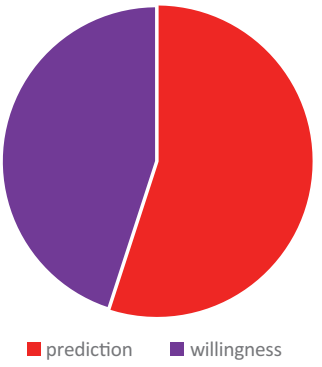

Figure 4b. Distribution of meanings with *will forgive*

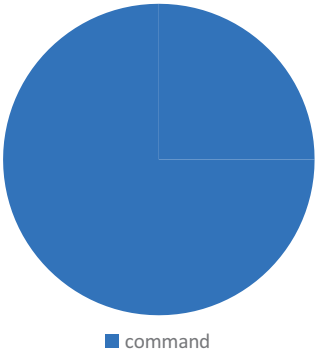

Figure 5a. Distribution of meanings with *must excuse*

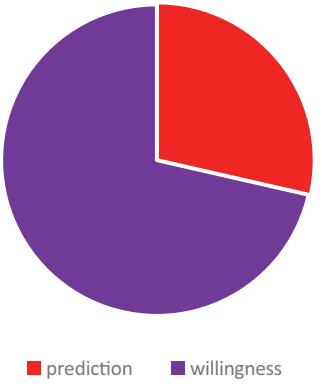

Figure 5b. Distribution of meanings with *will excuse*

excusal. The underlying semantic differences, however, result in different construals: while *must* expresses a passionate appeal via the 'command' sense, 'prediction' *will* rather expresses a sombre confidence. This is also evident in (24), which gives instances of 'prediction' *will forgive/excuse.*

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(24) (a) I shall like to wear this very much. You – you **will forgive** me for having been foolish – or if I have bored you? (CLMET3_1_3_255)
(b) And now, before I tell you more, you **will forgive** my asking you one or two personal questions. (CLMET3_1_3_305)
(c) But then, dear – you **will excuse** my speaking plainly – there is a slight difference between the two cases. (CLMET3_1_3_314)
(d) Good-night, Mrs. Pooter – you **will excuse** my very short stay, I know. (CLMET3_1_3_328)

The instances in (24) all express 'prediction', as the speaker is expressing their confidence in being excused or forgiven by the addressee in due course. In all instances *I know* or *I trust* can be added, which does not change the meaning and highlights the predictive nature of *will.* It might seem as if *will* could also express a 'command' here, but this does not seem to be the case: adding *I ask* to the sentences in (24) does change our interpretation of *will*, as can be seen in (25):

(25) (a) But then, dear – you **will excuse** my speaking plainly, [I trust] – there is a slight difference between the two cases.
(b) But then, dear – you **will excuse** my speaking plainly, [I ask] – there is a slight difference between the two cases.

In (25a) adding *I trust* does not alter the construal of asking for excusal (confidence in future excusal) clearly implied in (24c). In (25b), however, adding *I ask* does change the construal (firm 'command').

Similarly, *will excuse/forgive* can also express the implicit speech act asking for excusal/forgiveness, however, with the construal of banking on the addressee's willingness, as can be seen in (26).

(26) (a) As to danger, if you **will forgive** my saying so, I should find a luxurious life in a place like Greyshot infinitely more trying. (CLMET3_1_3_272)
(b) I beg your pardon, I hope you **will forgive** the liberty that we – perfect strangers in the neighbourhood – are taking. (CLMET3_1_3_282)
(c) I am afraid – if **you will excuse** me – I must join my wife. (CLMET3_1_3_260)
(d) And if you **will excuse** me mentioning it, miss, I could wish that this shameful treatment would show to you what a delusion it is you've taken up of late. (CLMET3_1_3_272)

The instances in (25) all express 'willingness'. The speaker wants the forgiveness or excusal by the addressee, but instead of expressing that they are confident of being forgiven, they are banking on the addressee's willingness, i.e. their acceptance of complying with the speaker's desire for forgiveness or excusal.

This indicates that while there is specialisation of 'command' *must* for *forgive/excuse* over 'command' *will*, it cannot be said that 'command' *must forgive/excuse* (25 instances) have specialised for the expression of the speech act 'asking for forgiveness/excusal', since 'willingness' *will forgive/excuse* (19 instances) and 'prediction' *will forgive/excuse* (15 instances) express the same speech act and are similarly frequent. Instead, they are different construals of the same speech act (asking for forgiveness or excusal exist) but differ in terms of directness, and by extension in terms of politeness and emotionality (see figure 6): 'command' is the most direct construal, because it 'stands for the request scenario as a whole' (Ruytenbeek 2021: 83). As such, while it is still polite (probably because forgiveness is something that can never truly be commanded but needs to be

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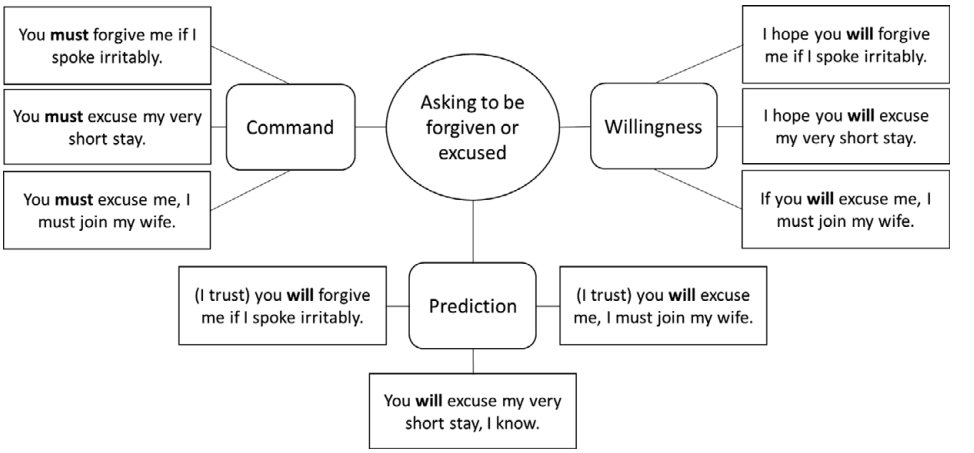

Figure 6. Different construals of asking for forgiveness

freely given by the addressee), it is less polite than the other two construals, because the 'command' construal foregrounds the deontic force, which in this case is interpreted as higher emotional involvement by the speaker. 'Willingness' is less direct, because it rather expresses a condition for the request to be fulfilled. As such, it is the most polite construal, precisely because it is indirect and activates the pre-stage of the request. 'Prediction' is similarly indirect, as it expresses the result of the request, but it is less polite precisely because the request is made by presuming the request will be granted (cf. Panther & Thornburg 1998 in Ruytenbeek 2021: 83). The different effects of the three construals can be compared in figure 6.

5. Discussion

In this article, I investigated the feasibility of different motivations for specialisation. Specialisation was defined as a specific outcome of competition where one expression that functionally competes with another expression occurs significantly more often. In addition to two motivations for specialisation proposed by previous studies, i.e. construal pre-emption and statistical pre-emption, I suggested polysemous pre-emption as a possible motivation for specialisation. Polysemous pre-emption means that one expression is semasiologically (i.e. relative to its other meanings) less entrenched with the target meaning than its competitor, which might pre-empt its use. The main purpose of the article was to see in how far polysemous pre-emption could motivate specialisation in the competition of *will* and *must* for specific verbs. I looked at the meanings 'command' and 'inference', which both *will* and *must* express, although they exhibit differences in construal in some contexts. I identified six instances of specialisation and investigated possible motivations for this specialisation.

The investigation found that all instances of specialisation could be explained by construal pre- emption. However, it also showed that in some instances, polysemous pre-emption could be a possible motivation. I showed that in these cases the rejected expression had highly frequent polysemes, which indicate that the speaker better associates that expression with other meanings instead of the target meaning. This was especially conspicuous in the case of rejection of 'command' *will forgive.* When substituting *will* in an

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instance of 'command' *must forgive* (*You must forgive me*) speakers might default to a 'prediction' interpretation, which is a better entrenched polyseme here.

I want to highlight, though, that polysemous pre-emption is only seen as a possible, not the sole, contributing motivation for specialisation. This is because, despite their conceptual similarities, the small meaning differences between 'command' and 'inference' *will* and *must* often meant that the two expressions could not always be interchanged, when it came to a specific communicative intent. 'Inference' *must be* for instance could be replaced by 'inference' *will be* with the communicative function of making assumptions about the addressee's emotional state but less so in other contexts. The construal differences that drive specialisation usually boil down to politeness and degree of force. 'Command' *must forgive*, for instance, serves the communicative function or speech act of asking for forgiveness by construing it as a passionate appeal. 'Command' *will forgive* was, for instance, completely unattested in the corpus, because the degree of force that *will* assumes here would be incompatible with the communicative function. This shows that even if two expressions have similar meanings they are not always similarly appropriate for the expression of the same communicative function.

It might seem as if polysemous pre-emption is not really a motivation for specialisation in the cases investigated, because construal pre-emption on its own seems able to account for specialisation. However, activation and selection of different meanings for production and comprehension is complex and multifaceted and it is likely that different motivations factor into it. Construal and polysemous pre-emption are, for instance, both captured in Giora's concept of salience (Giora 2003). Salience is a property of meanings at a given point in time, which is a function of frequency, familiarity, prototypicality, contextual appropriateness and priming; more salient meanings are more easily activated than less salient meanings. In the case of the rejection of 'command' *will forgive* it could be argued that 'prediction' *will forgive* is more salient not only by virtue of its contextual appropriateness, because it offers a more polite construal than 'command' for asking for forgiveness (~construal pre-emption), but also by virtue of frequency, because *will* is more frequent with the meaning 'prediction' than with 'command' (~polysemous pre-emption).

I have also found that two expressions that have different coded meanings could be used to express the same communicative function or speech act. Asking for forgiveness, for instance, could be construed as a passionate appeal ('command' *must forgive*), an indirect request ('willingness' *will forgive*) or confidence in future forgiveness ('prediction' *will forgive*). None of the construals has specialised for expressing forgiveness; instead, speakers can freely choose between the construals, depending on the degree of politeness or emotionality they want to express.

Through the qualitative analysis of *will* and *must* with 'command' and 'inference', the article also contributes to a better understanding of the respective similarities and differences between the two expressions. Across different contexts and meanings, I found that *must* can often express a degree of agitation, emotion and urgency that is in general absent from *will.* These tendencies can be observed both with 'command' and 'inference' *must.* In *you must remember* and *you must forgive/excuse*, for instance, 'command' *must* is only possible because it signals a degree of emotional involvement (almost desperation) which softens the otherwise strong deontic force of the 'command'. 'Inference' *you must remember* on the one hand is less common precisely because of the sense of urgency it expresses (i.e. you must remember, there is no other possibility). *Will* on the other hand expresses a confidence both with 'command' and 'inference' meaning.

The article has thus delivered on testing the potential for polysemous pre-emption but cannot reliably show the size of its effect on specialisation, given that construal pre-emption could also be attested.

https://doi.org/10.1017/S1360674325100403 Published online by Cambridge University Press

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Cite this article: Dietrich, Nadine. 2025. Motivations for specialisation: testing the feasibility of polysemous preemption in the competition between *will* and *must*. *English Language and Linguistics* 1–24. https://doi.org/10.1017/S1360674325100403